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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/784,886 | 02/24/2004 | Yoshihisa Ogata | 11-226 | 9958 |

23400 7590 08/11/2005

POSZ LAW GROUP, PLC
12040 SOUTH LAKES DRIVE
SUITE 101
RESTON, VA 20191

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| EXAMINER |
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BROADHEAD, BRIAN J

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| ART UNIT | PAPER NUMBER |
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3661

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/784,886

Applicant(s)

OGATA ET AL.

Examiner

Brian J. Broadhead

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6-8-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 16 recites the limitation "the threshold" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 10-16, and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagao et al., 2002/0099486.
6. As per claims 10-14, 19 and 20, Nagao et al. disclose a roll angular velocity detector detecting a roll angular velocity of the vehicle(21); an acquiring unit acquiring a roll angle of the vehicle(515); a rollover determination unit performing a rollover determination whether or not there is a possibility that the vehicle will make a rollover,

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on the basis of a value of the roll angle and a value of the roll angular velocity(520); an acceleration detector detecting a lateral acceleration to be applied on the vehicle in a lateral direction of the vehicles(505); a side-impact determination unit performing a first side-impact determination determining whether or not there is a side impact applied on the vehicle on the basis of a value of the lateral acceleration detected by the acceleration detector and a second side-impact determination whether or not the side impact occur on which lateral side of the vehicle on the basis of the value of the lateral acceleration in paragraphs 41 and 42; and an activation control unit controlling activation of the occupant protective devices, every device mounted on each lateral side of the vehicle, using results determined by at least one of the rollover determination unit and the side-impact determination unit(20a); to control one or more devices of the plural occupant protective devices on the basis of a result of the first side-impact determination, the one or more occupant protective devices being mounted on a collision side of the vehicle decided by the second side-impact determination and to control remaining one or more devices of the plural occupant protective devices on the basis of a result of the rollover determination, the one or more remaining occupant protective devices being mounted on a non-collision side of the vehicle decided by the second side-impact determination in paragraphs 43 and 44; the rollover determination unit has a two-dimensional map consisting of the roll angle and the roll angular velocity serving as two dimensions, boundary lines being set on the map to form a first region showing a possibility of a vehicle's rollover and a second region showing no possibility of the vehicle's rollover, and means for performing the rollover determination by pointing

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at a point on the map, the point being defined by both the value of the roll angle and the value of the roll angular velocity in figure 8; and the side-impact determination unit is configured to perform the first side-impact determination using a magnitude relation between the value of the lateral acceleration and a predetermined threshold thereto in paragraph 41; to control one or more devices of the plural occupant protective devices on the basis of at least one of a result of the first side-impact determination and a result of the rollover determination, the one or more occupant protective devices being mounted on a collision side of the vehicle decided by the second side-impact determination and to control one or more remaining devices of the plural occupant protective devices on the basis of a result of the rollover determination, the one or more remaining occupant protective devices being mounted on a non-collision side of the vehicle decided by the second side-impact determination in paragraph 50.

7. As per claims 15, 16, and 18, Nagao et al. disclose the rollover determination unit has a two-dimensional map consisting of the roll angle and the roll angular velocity sensing as two dimensions, boundary lines being set on the map to form a first region showing a possibility of a vehicle's rollover and a second region showing no possibility of the vehicle's rollover, and means for performing the rollover determination by pointing at a point on the map, the point being defined by both the value of the roll angle and the value of the roll angular velocity and the side-impact determination unit is configured to perform the first side-impact determination using a magnitude relation between the value of the lateral acceleration and a predetermined threshold thereto in figure 8; the

boundary lines are adjustable to positions closer to an origin of the map in paragraphs 72-75.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 through 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagao et al., 2002/0099486, in view of Schiffmann, 6038495.

10. Nagao et al. disclose the limitations as set forth above. Nagao et al. do not disclose a first calculator calculating a predictive value to the roll angular velocity to be expected when a predetermined period of time elapses, by using a past value of the roll angular velocity of the vehicle, the past value being memorized in the memory unit; the first calculator configured to use the value to the roll angular velocity to obtain a derivative of the roll angular velocity and to calculate the predictive value to the roll angular velocity using a Taylor's expansion of the derivative directed to a time instant when the predetermined period of time elapses; a second calculator calculating a predictive value to the roll angle to be expected at a time instant when the predetermined period of time elapses, by using the predictive value to the roll angular velocity; and a third detector detecting vertical acceleration to be applied on the vehicle in a vertical direction. Schiffmann teaches calculating predictive values to be expected when a predetermined period of time elapses, by using a past values, the past value

being memorized in the memory unit on lines 5-10, on column 5; the first calculator configured to use the value to obtain a derivative of the roll angular velocity and to calculate the predictive value to the roll angular velocity using a Taylor's expansion of the derivative directed to a time instant when the predetermined period of time elapses(104); a second calculator calculating a predictive value to the roll angle to be expected at a time instant when the predetermined period of time elapses, by using the predictive value to the roll angular velocity on lines 5-10, on column 5; and a third detector detecting vertical acceleration to be applied on the vehicle in a vertical direction on lines 22-23, on column 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings of Schiffmann with the invention of Nagao et al. because such modification would predict a future rollover condition in advance to allow time to deploy occupant protection measures as stated on lines 54-56, on column 1. While Schiffmann does not disclose two calculators in the combination with Nagao et al. it would be obvious to predict both the values used to predict rollover in Nagao et al.

Allowable Subject Matter

11. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose determining a rollover condition based on the change in the value of roll velocity over time.

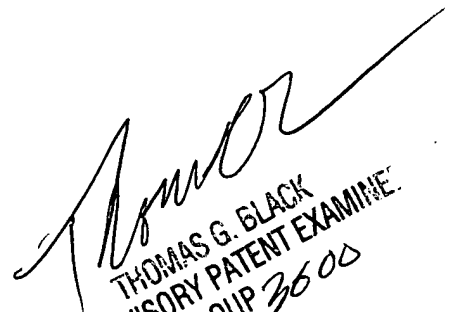
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Broadhead whose telephone number is 571-272-6957. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


BJB


THOMAS G. BLACK
SUPERVISORY PATENT EXAMINER
GROUP 3600